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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,490	04/25/2001	Yan Ivan Wang	796.390USWI	7933
32294	7590	05/20/2004	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			VUONG, QUOC HIEN B	
			ART UNIT	PAPER NUMBER
			2685	7
DATE MAILED: 05/20/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/842,490	WANG ET AL.
Examiner	Art Unit	
Quochien B Vuong	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 25 April 2001.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1,2,4,6,7 and 9 is/are rejected.

7)  Claim(s) 3, 5, 8 , and 10 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 04/25/01 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Objections***

3. Claim 3 is objected to because of the following informalities: the phrase "characterized in that that filtering" on line 2 should be changed to --characterized in that filtering--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 9 recite the limitation "the sliding window" in claim 4, line 4 and claim 9, line 2, respectively. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Akerberg (US 6,553,078).

Regarding claim 1, Akerberg discloses a method to implement transmission diversity in a radio system, particularly in a mobile communications system (figure 1) that comprises at least one receiving unit (MS1-MS2) and at least one transmitting unit (BS), in which radio system the receiving unit and transmitting unit set up a data transmission connection over a radio path, the said method comprising transmission of the signal to the receiving unit using the preferred diversity option (column 4, lines 57-

60), monitoring of the received signal by the receiving unit for quality sending of feedback data from the receiving unit to the transmitting unit based on the said monitoring (column 4, lines 38-48), and selection of the diversity option in response to the feedback data (column 4, lines 51-56), which is used for sending the signal at any given time, characterized in that the feedback data consists of the power control messages sent by the receiving unit that are used as a basis for selecting the transmission diversity option to be used (figure 6, column 4, lines 28-56).

Regarding claim 2, Akerberg discloses the transmitting unit filters the data required for the selection of the transmission diversity option from the power control message (column 4, lines 51-56).

Regarding claim 6, Akerberg discloses an arrangement for implementing transmission diversity in a radio system (figure 1), particularly in a mobile communications system that comprises at least one receiving unit (MS1, MS2) and at least one transmitting unit (BS), in which radio system the receiving unit and transmitting unit set up a data transmission connection over a radio path, the said arrangement incorporating measuring elements on the receiving unit to measure the properties of the signal to be received (column 4, lines 38-48), feedback elements to transmit the transmission diversity data to the transmitting unit based on the said measurement (column 4, lines 51-52), and switching elements to select the preferred transmission diversity option (column 4, lines 54-56) characterized in that the feedback elements contain elements that the receiving unit (figure 7) uses to send power control messages to the transmitting unit, and that the transmitting unit (figure 5) contains

control elements that are functionally connected to control the switching elements in response to the power control messages received (column 4, lines 38-56; and figure 6).

Regarding claim 7, Akerberg discloses the control elements contain filtering elements for filtering the power control messages (column 4, lines 51-56).

### ***Allowable Subject Matter***

8. Claims 3, 5, 8, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3 and 8, Akerberg discloses the method and arrangement of claims 2 and 7, respectively. However, Akerberg fails to further teach that filtering is carried out by counting the number of certain type of power control messages from a sliding window comprising of the preferred number of successive power control messages.

Regarding claim 5 and 10, Akerberg discloses the method and arrangement of claims 1 and 6, respectively. However, Akerberg fails to further teach that the transmitting unit continuously counts the number of certain type of incoming successive power control messages, and when the said number reaches a certain predefined value, a decision is made on the diversity option to be used and whenever a different type of power control message is received, the count is

reset.

9. Claims 4 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claim 4 and 9, Akerberg discloses the method and arrangement of claims 2 and 7, respectively. However, Akerberg fails to further teach that filtering is carried out by means of a table that includes all the possible variations of the power control message strings contained in a sliding window.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeSantis et al. (US 5,628,052) disclose a wireless communication system using distributed switched antennas.

Greentein et al. (US 6,131,016) disclose a method and apparatus for enhancing at a wireless communication terminal.

Hiramatsu et al. (US 6,600,933) disclose a transmission diversity method.

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA 22202, Fl 6th.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (703) 306-4530. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.

*Quochien B. Vuong*

**QUOCHIEN B. VUONG  
PRIMARY EXAMINER**

Quochien B. Vuong

May 13, 2004.